ABSTRACT OF THE DISCLOSURE

Dual-phase steels are produced from the hot-rolled state with a two-phase microstructure of 70-90 % ferrite and 30-10 % martensite by controlled temperature guiding and defined cooling with a first cooling stage at a first slow cooling rate and a second cooling stage at a second higher cooling rate. The cooling curve enters the ferrite region at a temperature still so high that the ferrite formation takes place quickly. The first cooling stage is performed at a rate of 20-30 K/s in a cooling stretch of several successive spaced-apart water cooling stages. Before beginning the second cooling stage, following without intermediate air cooling and holding time directly after the first cooling stage, at least 70 % of the austenite is already transformed to ferrite by continuing cooling of the first cooling stage during the transformation of the austenite into ferrite up to the desired ferrite contents of at least 70 %.